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**Balanced transcription of cell division genes in *Bacillus subtilis* as revealed by single cell analysis**

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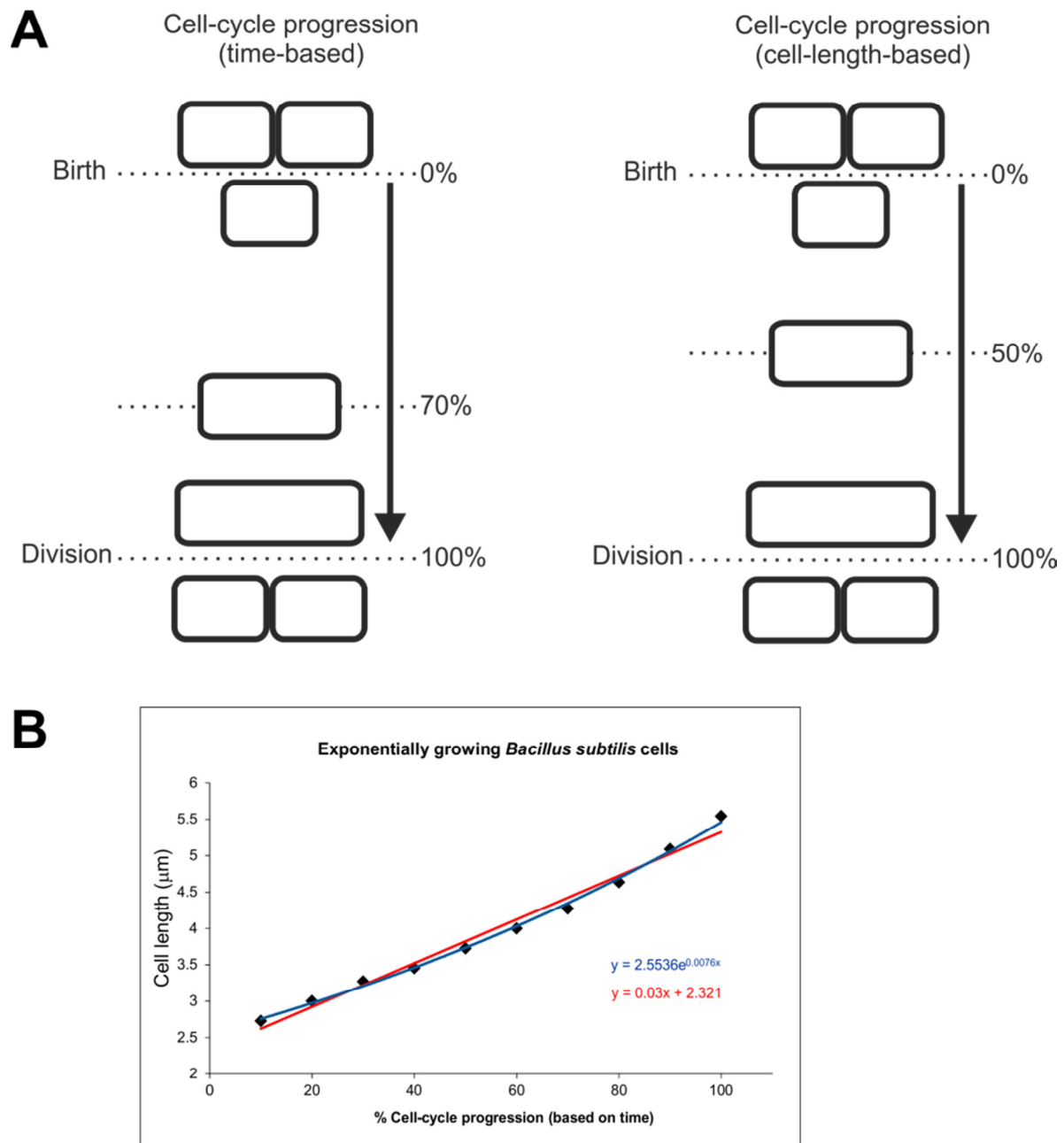
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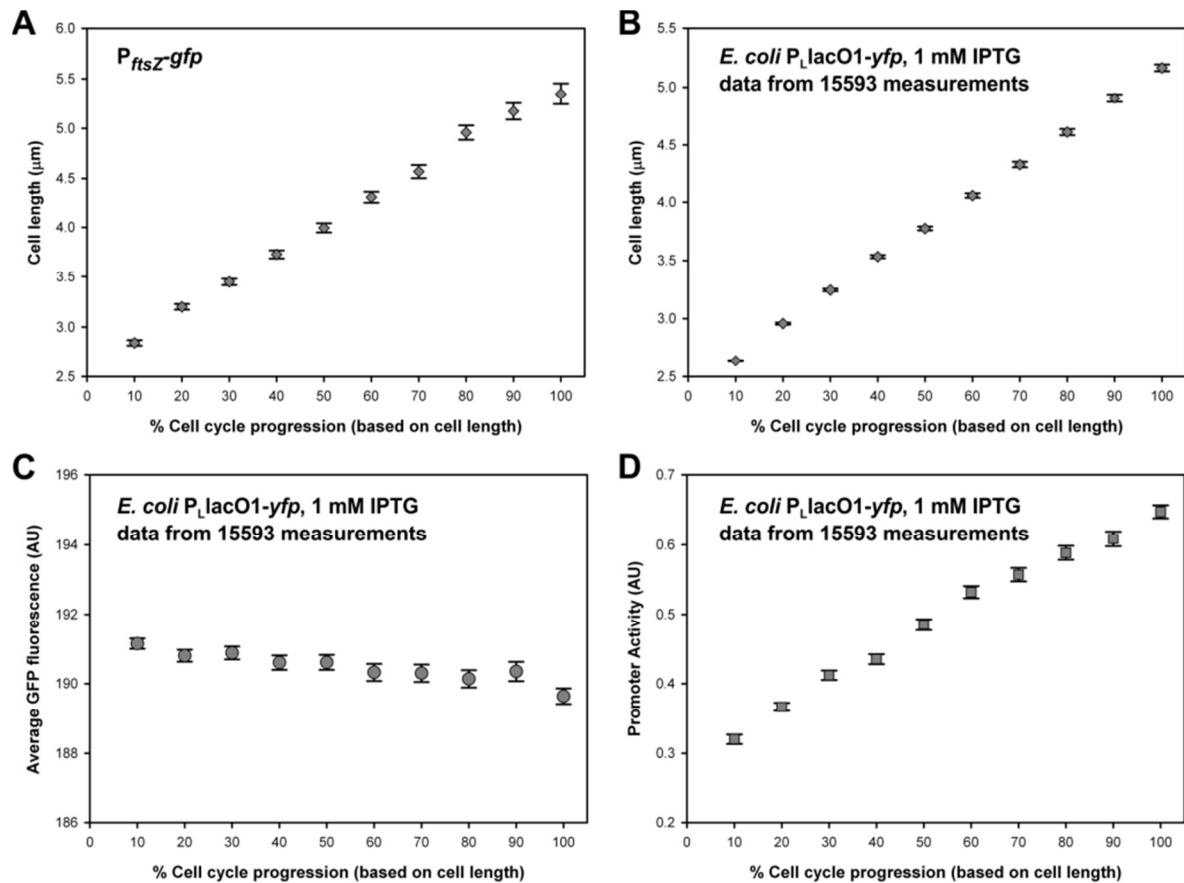
Figure S1. Defining cell-cycle progression and exponential length growth in *Bacillus subtilis*



**Fig. S1.** Defining cell-cycle progression and exponential length growth.

A. Cell-cycle progression defined as a function of time since birth and new cell division (left). Cell-cycle progression defined as a function of cell length (% of maximal cell length at time prior to new cell division) (right).

B. More than 900 data points of exponentially growing *B. subtilis* cells are plotted as a function of the cell-cycle progression in time (see *Experimental procedures*). The data points are much a better fit to an exponential curve than to a line ( $R^2 = 0.997$  versus 0.982 respectively),



**Fig. S2.** Validation of our cell-cycle progression software routines.

A. All data points of *B. subtilis*  $P_{ftsZ}\text{-gfp}$  (~900) were plotted as a function of cell-cycle progression based on cell length versus cell length. A clear straight line is visible demonstrating that the binning procedure works as expected. Error bars represent standard error of the mean.

B. Same as for (A) but now on a large (15593 data points) *E. coli* data set (Stewart *et al.*, 2005).

C. Average fluorescence from cells carrying an IPTG inducible YFP construct grown in the presence of 1 mM IPTG as a function of cell-cycle progression. Same data set as used for (B). Error bars indicate standard error of the mean.

D. Promoter activity (normalized GFP production per minute) as a function of cell-cycle progression for the *E. coli* data set. Error bars indicate standard error of the mean. Note the approximate twofold increase in PA at the end of the cell cycle.

**Movie S1.** This film shows approximately 20 h of the growth of a *B. subtilis* microcolony harbouring the *PftsZ-gfp* construct. Images were taken every 8 min. Scale bar: 10  $\mu\text{m}$ .